

## FARMERS' PERCEPTION ON USE OF BIO FERTILIZERS

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### ABSTRACT

The study was conducted in 10 villages of Mahesana and Visnagar taluka of Mahesana district. The size of sample was 100 farmers. Majority of farmers were middle aged, literate, had membership in one organization, had more than 10 years of farming experience, medium level of extension participation, possessed more than 2 ha land, used flood & sprinkler method of irrigation, medium level of income & heard size. The lack of knowledge regarding bio-fertilizer, benefits of bio fertilizer are not visible and non availability at local place were perceived as a low rate of adoption of bio fertilizer. Majority of farmers perceived need of training on bio fertilizer. One day duration training in month of June at farmer's field was preferred by farmers.

**Keywords:** use of biofertilizers, farmers perception

### INTRODUCTION

Adverse effects are being noticed due to the excessive and imbalanced use of chemical fertilizers. The scientists are compelled to look alternatives of chemical fertilisers. Therefore, judicious combination of chemical fertilizers, organic manures and bio fertilizers is essential. Farmers have to adopt integrated nutrient supply. There are many recommendations on use of bio fertilizers in many crops as a cheap source of nutrients. However, it is observed that the bio fertilizers are not popular among the farmers. Bio fertilizers, improves the soil properties, maintains the soil fertility and harmless. Bio fertilizers can play a vital role as a low cost input for sustainable agriculture for small and marginal farmers who cannot afford the expense of chemical fertilizers. The use of bio fertilizers is affordable and economical for crops such as cereals millets, oilseeds spices vegetable, fruits etc. Hence, it is necessary to know the farmers' perception on use of bio fertilizers with following objectives.

### OBJECTIVES

- To study the selected socio economic attributes of the farmers
- To know the perception of farmers on use of bio fertilizers

### METHODOLOGY

The study was conducted in Mehsana and Visnagar taluka of Mehsana district. Five villages from each taluka were selected randomly. Ten farmers from each selected village were selected randomly.

**Table 1 : Selection of talukas, villages and farmers**

District	Taluka	Village	No of Farmers
Mehsana	Mehsana	Mevad	10
		Punasan	10
		Kherva	10
		Kochva	10
		Linch	10
	Visnagar	Umta	10
		Paldi	10
		Sevalia	10
		Kasa	10
		Saduthala	10

Thus, final sample of study was 100 farmers. The data were collected through interview schedule. The data were tabulated, analyzed and interpreted in light of the objectives. The detail regarding selection of talukas, villages and farmers is as under.

**RESULTS AND DISCUSSION**

**Socio economic attributes of the respondents**

The main purpose of the present investigation was to study the Farmers' perception on use of bio fertilizers of Mahesana district of Gujarat state. The results are presented as under.

The relevant socio-economic attributes of the respondents were included in the study. The results on such characteristics are given in table 2.

**Table:2 Distribution of the farmers according to their socio economic attributes**

**n=100**

Sr. No.	Socio economic attributes	Classification	Frequency	Per cent
1	Age group	Young age (below 35 Yrs.)	18	18.00
		Middle age (33-50 Yrs.)	69	69.00
		Old age (Above 50 Yrs.)	13	13.00
2	Education	Illiterate	23	23.00
		Primary level (1-7 std.)	30	30.00
		Secondary level (8-10 std.)	32	32.00
		Higher Secondary level (11-12 std.)	09	9.00
		Collage level	06	6.00
3	Social participation	No membership	01	1.00
		Membership in one organization	52	52.00
		Membership in more than one organization	42	42.00
		Membership with holding position	05	05.00
4	Farming Experience	Below 10 years	19	19.00
		10-20 years	37	37.00
		21-30 years	26	26.00
		More than 30 years	18	18.00
5	Land holding	Marginal (Below-1 ha)	10	10.00
		Small (1-2 ha)	24	24.00
		Medium (2-4 ha)	36	36.00
		Big (above 4 ha)	30	30.00
6	Method of Irrigation	Flood	30	30.00
		Farrow	58	58.00
		Sprinkler	13	13.00
		Drip	07	07.00
7	Extension participation (Mean = 29.09, S. D. = 14.02)	Low	15	15.00
		Medium	56	56.00
		High	29	29.00
8	Annual income (Mean =2.42, SD= 6.35)	Low (below 0.55 lacs)	27	27.00
		Medium (0.55-3.85 lacs)	69	69.0
		High(above 3.85 lacs)	04	4.00
9	Herd size (Mean=2.42, SD= 6.35)	Small (below 4)	11	11.00
		Medium (4-10)	74	74.00
		Big (above 9)	15	15.00

The data presented in table 2 show that majority (69.00%) of the farmers belong to middle age group (35-50 years), followed by young and old age group 18.00 and 13.00 per cent respectively. The 32.00 per cent of farmers had secondary level of education; followed by primary level (30.00 %), higher secondary level (9.00%) and collage level (6.00 %), whereas 23.00 per cent of the farmers found illiterate. More than half (52.00 %) farmers were members in one organization followed by membership in more than

one organization (42.00 %). Only 5.00 per cent farmers hold position in social organization, only 1.00 percent of farmers had no member in any organization. Majority (37.00 %) of the farmers possessed 10 to 20 years farming experience followed by 26.00 per cent of the farmers with more than 20 years farming experience. Whereas 19.00 per cent farmers had below 10 years experience. On other hand 18.00 per cent of the farmers had more than 30 years of farming experience. The data indicated that 36.00 per cent of the farmers were

medium farmers followed by big farmers (30.00 %) and small farmers (24.00 %). Only 10.00 per cent of them were marginal farmers. The 58.00 per cent of the farmers were following furrow irrigation followed by flood method (30.00 %). Whereas 13.00 per cent of them had followed sprinkler method any 7.00 per cent had adopted drip system of irrigation. The 56.00 per cent farmers falls under medium level of extension participation where as 29.00 per cent and 15.00 per cent of them possessed high and low level of extension participation respectively. It is revealed that 69.00 per cent of the farmers fall in medium category of annual income followed by 27.00 per cent in low and only 4.00 per cent in high income category. Majority (74.00 %) of the farmers possessed medium herd size followed by big herd size (15.00 %) and small herd size (11.00 %) respectively.

**Perception of farmers on low rate of adoption of bio fertilizers**

The information regarding perception of farmers is depicted in table 3.

**Table 3: Distribution of farmers according to their perception on low rate of adoption of bio fertilizers. n=100**

Sr. No.	Particular	Frequency	Percent	Rank
1	Non availability at local place	75	51.33	II
2	Lake of storage facility	17	12.00	V
3	Complex method of application	21	14.00	IV
4	Benefits are not visible	46	30.67	III
5	Lack of knowledge	89	66.67	I
6	Stopped the use of bio fertilizers due to no benefit found	10	07.33	VI

The perception of farmers on low rate of adoption of bio fertilizers were lack of knowledge regarding bio fertilizers (66.67%), non availability at local place (51.33 %) and benefit of bio fertilizers is not visible (30.67 %) ranked first, second and third respectively.

**Perception of farmers regarding need, month, duration and place of training on bio fertilizer**

The information regarding farmers perception on

need, month, duration and place of training on bio fertilizer is depicted in Table 4.

**Table 4: Distribution of farmers according to perception regarding need, month, duration and place of training on bio fertilizer. n=100**

Sr. No.	Particulars	Frequency	Percent
1	<b>Need</b>		
	Yes	94	94%
	No	06	6 %
2	<b>Month of Training</b>		
	June	69	73.40
	September	13	13.83
	January	12	12.77
3	<b>Duration of training</b>		
	1 day	57	60.64
	2 day	27	28.72
	3 day & more	10	10.64
4	<b>Place of training</b>		
	On farmer's field	42	44.68
	At KVKs or training institute	24	25.53
	At Agricultural University	18	19.15
	At Research Station	10	10.64

It is apparent from the data in Table 4 that vast majority of farmers (94 %) reported that they need training while only 6 per cent reported that they did not need any training on bio fertilizers. Farmer's perception regarding month of training, majority of them preferred the month of June i.e. before monsoon in case of duration of training, majority of them (60.64 %) reported 1 day. Further, regarding the place of training, 44.68 per cent of them preferred farmer's field in their own village for organizing training while 25.53 per cent gave preference to KVK. The 19.15 per cent gave preference to Agricultural Universities, for training place. The 10.64 per cent of them gave preference to research station to organize training.

**CONCLUSION**

Majority of the farmers were middle aged, literate, possessed membership in one organization, had more than 10 years of farming experience, medium level of extension participation, owned more than 2 hectare of land, medium level of income medium level of herd size and used flood & sprinkler method of irrigation. The perception on low adoption of bio fertilizers were lack of knowledge non availability local place and benefits of bio fertilizers is not visible. The perceptions of farmers regarding training were; majority of farmers need training, majority of farmers preferred the

month of June and 1 or 2 days duration of training. The place of training preferred by farmers were; farmer' field in their own village and KVKs.

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